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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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Preliminary Draft Staff Report

Proposed Amended Rule 1309.1 – Priority Reserve

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EXECUTIVE SUMMARY

While new electrical generating facilities (EGFs) have steadily been coming on-line since 2001, the prospect of electrical power shortages in Southern California and the South Coast Air Basin (Basin) in particular continues. Factors contributing to potential shortages in the Basin include increasing power demand, the retirement of some older EGFs and limitations of the power grid system in allowing the transfer of power from northern California to southern California. Siting of approximately 2,700 megawatts (MW) of new electrical power generation has been proposed in the Basin. All these proposed projects will be required to minimize their emissions by installing Best Available Control Technology (BACT) and offset all of their remaining emission by securing emission reduction credits (ERCs). With the exception of the essential public services and certain other operations that have access to the AQMD's Priority Reserve, most other operations, including power plants, procure their offset credits from the open market. However, there continues to be a shortage of ERCs, specifically SO_x, PM₁₀ and CO in the open market.

To address these shortages in the open market and respond to the region's demand for additional power, staff proposed and the AQMD Governing Board adopted amendments on September 8, 2006 to provide a limited time window for EGFs to utilize credits from the Priority Reserve, provided they demonstrate that the required offsets are not reasonably available in the open market and meet other eligibility criteria and requirements.

To provide the public residing in more polluted areas with added protection and incentivize the siting of the new power plants in less polluted areas, in adopting the amendments to Rule 1309.1, the Board directed staff to develop additional requirements for EGF projects proposing to locate in the more polluted areas within the District.

In response to the Board directive, staff has developed an amendment that sets additional criteria, including higher mitigation fees, for those EGF projects locating in more polluted areas and are seeking access to Priority Reserve. Furthermore, the amendment would prohibit EGFs locating in the most polluted areas from accessing the Priority Reserve.

BACKGROUND

The California Energy Commission (CEC) permits all power projects rated at or above 50 megawatts. State regulations give sole permitting authority including local land use and environmental regulations to the CEC. In addition, Public Resources Code provides a statutory exemption from CEQA for EGF projects that will be subject to an EIR or

Negative Declaration or other documents prepared pursuant to a certified regulatory program by the CEC. The CEC process for certification of proposed power projects includes such documentation. The CEC does require that all power projects meet all air quality regulations. For the AQMD, the main regulation affecting the permitting of power projects is New Source Review (Regulations XIII and XX). NSR requires that all projects satisfy Best Available Control Technology (BACT), modeling, offset, and public notice requirements. One potentially problematic area for power projects in the Basin has been and continues to be obtaining adequate offsets.

In accordance with State and federal laws, all emission increases from new and modified facilities must be offset. Under District rules most facilities with a potential to emit of greater than 4 tons per year of SO_x or PM₁₀ or 10 tons per year of CO are required to provide external offsets. External offsets are almost always in the form of ERCs. ERCs are created through the shutdown or over-control of processes. ERCs are only granted for that portion of emissions which exceed current AQMD BACT standards and are not otherwise required by rule, regulation, law, approved Air Quality Management Plan Control Measure, or the State Implementation Plan. Emission increases from all other sources are offset through the AQMD's NSR account that also includes the Priority Reserve. The ERC generation procedures coupled with the fact that stationary sources are relatively small contributors to the Basin's SO_x, CO, and PM-10 inventory, have been limiting factors in generating significant amounts of ERCs.

In 2005, despite new EGF projects, California once again experienced some Stage 2 shortages (power reserves down to 5%) and the CEC outlook for the foreseeable future is that demand for electrical power will continue to increase. The increase in demand is due to several factors including increased consumption and retirement of older EGFs. There are also limits on the amount of electrical power that can be imported into the Southern California region from Northern California and Arizona due to bottlenecks in transmission lines. New EGFs are needed in the local region. The proposed amendments once again provide new EGFs access to the Priority Reserve where these proposed projects either do not have or cannot secure the needed offsets on the open market, provided they are not to be constructed in those areas with the poorest air quality.

PROPOSED AMENDMENTS TO RULE 1309.1 – PRIORITY RESERVE

The proposed amendments to Rule 1309.1 are designed to provide access to the Priority Reserve for certain critical EGF projects that meet specific requirements and that cannot secure the needed offsets on the open market. The amendments apply to In-Basin EGF projects for which a complete initial application for certification to the CEC or a complete application for a permit to construct was filed in calendar years 2005, 2006, 2007 or 2008.

In response to the Governing Board direction to establish air quality criteria as a condition to purchase credits and to encourage the siting of the new power plants in lesser polluted areas, staff has developed a proposal that limits or sets additional requirements for EGF projects to access the Priority Reserve if they are to be located in areas with historically high or moderately high ambient concentrations of PM_{2.5}. Fine particles in the PM_{2.5} fraction have the ability, because of their size, to penetrate and deposit deep in the lungs. Elevated concentrations of PM_{2.5} are associated with adverse health impacts that are a lot more serious compared to the health impacts from other criteria pollutants. Increased mortality, reduction in lung function, and increased hospitalizations are among some of the adverse health impacts associated with exposure to elevated concentration of PM_{2.5}. Most of the Basin is currently in non-attainment with regards to the annual and 24-hour federal ambient air quality standards of 15µg per cubic meter and 35µg per cubic meter, respectively. The Basin has until 2015 to demonstrate attainment with the annual PM_{2.5} standard. EGFs are large point sources of PM_{2.5} emission and these additional limitations and requirements are consistent with the AQMD efforts to achieve air quality goals.

The proposed amendment, as indicated in Figure 1, subdivides the Basin into three zones (Zone 1, Zone 2 and Zone 3) based on the average PM_{2.5} concentration observed for years 2003 through 2005. These zones correspond to health based exposure levels and are used as the criteria for both eligibility to access the Priority Reserve and the mitigation fee pricing of Priority Reserve credits. For any given project, District staff will determine the exact zone in which that project is located by use of UTM coordinates.

In-Basin EGFs are only eligible to purchase PM₁₀, SO_x or CO credits from the Priority Reserve if located in areas shown in Figure 1, with an annual average PM_{2.5} concentration of less than 20µg/m³ (Zone 1 or Zone 2). In-Basin EGFs being sited in the area in Figure 1 with an annual average PM_{2.5} concentration greater than 20µg/m³ (Zone 3) would not be eligible to access the Priority Reserve for offset credits.

In-Basin EGFs located in areas shown in Figure 1 with an average PM_{2.5} concentration in years 2003 through 2005 of between 18 and 20µg/m³ (Zone 2) must also meet the following criteria in order to be eligible to receive credits from the Priority Reserve:

- (a) Demonstrate that the cancer risk from the EGF is less than one in one million; and
- (b) Demonstrate that the non-cancer risk (acute and chronic) Hazard Index from the EGF is less than or equal to 0.5; and
- (c) Demonstrate that the cancer burden from the EGF is less than or equal to 0.1.

EGF projects are not expected to be significant sources of toxic emissions. However, these criteria, more stringent than similar criteria in other District rules, are to address the

concerns expressed by the environmental community for more health protective standards for EGF projects seeking Priority Reserve credits if they choose to locate in areas with moderately high ambient concentrations.

Further, a requirement has been added to allow access to Priority Reserve credits for EGFs proposing to locate in either Zone 1 or Zone 2 only if the location is beyond 1000 feet of schools.

In addition to meeting the above additional criteria, an EGF project proposed to be located in Zone 2 shall pay a premium for accessing credits from the Priority Reserve. This premium is to serve as an incentive for prospective projects to locate in lesser polluted areas of the Basin and will be used to fund additional air quality improvement projects. An In-Basin EGF located in areas with an arithmetic mean of PM_{2.5} concentration in years 2003 through 2005 of between 18 and 20 $\mu\text{g}/\text{m}^3$ (Zone 2) will pay mitigation fees of \$75,626, \$22,625 and \$18,000 per pound per day of PM₁₀, SO_x and CO, respectively. Whereas, an In-Basin EGF located in areas with an arithmetic mean of PM_{2.5} concentration in years 2003 through 2005 of less than 18 $\mu\text{g}/\text{m}^3$ as shown in Figure 1 (Zone 1) will pay mitigation fees of \$50,417, \$15,083 and \$12,000 per pound per day of PM₁₀, SO_x and CO, respectively.

CEQA ANALYSIS

The SCAQMD has reviewed the proposed project pursuant to CEQA Guidelines §15002(k)(1) and §15061(b)(1), and determined the project is exempt by statute pursuant to the California Public Resources Code (PRC) §21080(b)(6) and state CEQA Guidelines §15271(a). Under PRC §21080(b)(6), the State Legislature directed that actions undertaken by a public agency relating to any thermal power plant facility that will be the subject of an environmental impact report, negative declaration, or other document prepared pursuant to PRC §21080.5, by either the State Energy Resources Conservation and Development Commission or the California Energy Commission are not subject to CEQA if the CEQA document includes the environmental impacts, if any, of the actions described in PRC §21080(b)(6). In addition, because it can be seen with certainty that there is no possibility that the proposed project in question has the potential to have a significant adverse effect on the environment, the proposed project is exempt from CEQA pursuant to CEQA Guidelines §15061(b)(3) - Review for Exemption.

SOCIO-ECONOMIC IMPACTS

A socioeconomic analysis of the amendments to Rule 1309.1 will be performed and included as an attachment to the Board letter.

AQMP AND LEGAL MANDATES

The California Health and Safety Code requires the AQMD to adopt an Air Quality Management Plan (AQMP) to meet state and federal ambient air quality standards in the South Coast Air Basin. In addition, the California Health and Safety Code requires that the AQMD adopt rules and regulations that carry out the objectives of the AQMP. While Proposed Amended Rule 1309.1 is not a control measure included in the AQMP, its requirements are consistent with the AQMP objectives.

RESOURCE IMPACTS

The proposed amendments are not anticipated to have a significant impact on staff resources.

DRAFT FINDINGS

Before adopting, amending or repealing a rule, the AQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference, as defined in Health and Safety Code Section 40727. The draft findings are as follows:

Necessity – The AQMD Governing Board has determined that a need exists to amend Rule 1309.1 – Priority Reserve to limit or restrict electrical generating facilities from accessing credits from the Priority Reserve if they are located in heavily polluted areas.

Authority – The AQMD Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from Sections 40000, 40001, 40440, 42300 (permit system), and 40702 of the California Health and Safety Code.

Clarity – The AQMD Governing Board has determined that Rule 1309.1 – Priority Reserve, as proposed to be amended, is written or displayed so that its meaning can be easily understood by the persons directly affected.

Consistency – The AQMD Governing Board has determined that Rule 1309.1 – Priority Reserve, as proposed to be amended, is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations.

Non-Duplication – The AQMD Governing Board has determined that Rule 1309.1 – Priority Reserve, as proposed to be amended, does not impose the same requirements as

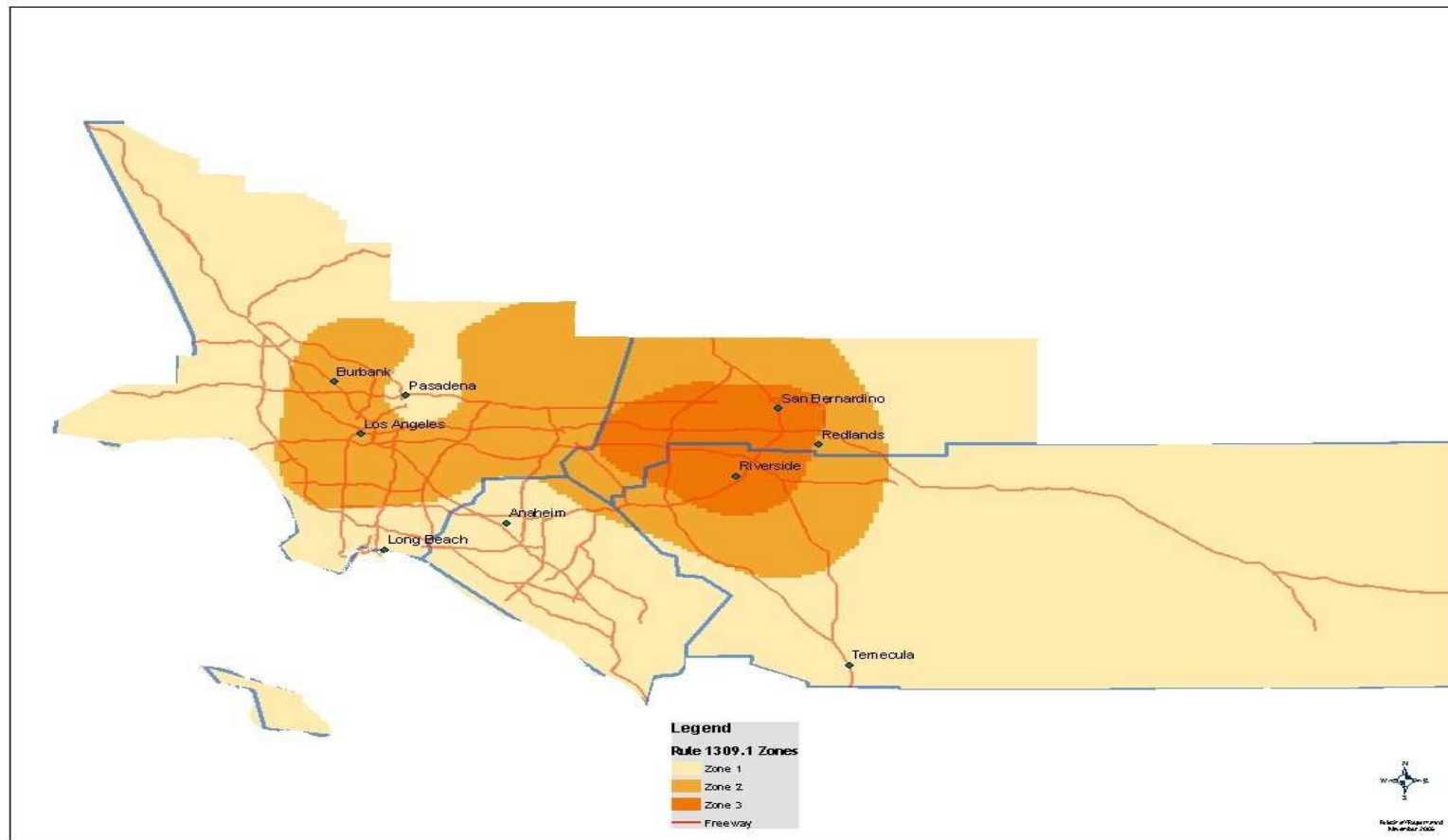
any existing state or federal regulation and is necessary and proper to execute the power and duties granted to, and imposed upon, the District.

Reference – The AQMD Governing Board, in amending the rule, references the following statutes which the AQMD hereby implements, interprets, or makes specific: Health and Safety Code Sections 42300, 40920.5, and CAA §§ 171, 172 and 182.

CONCLUSIONS AND RECOMMENDATIONS

Staff recommends amendment of Rule 1309.1 for the reasons stated in this staff report.

FIGURE 1
Three – Year Average (2003 – 2005) PM_{2.5} Concentration Zones in SCAQMD



CURRENT ESTIMATED DEMAND FOR OFFSETS

Estimated Emission Credits to be Withdrawn from Priority Reserve

	Project Capacity (MW)	PM10 (lbs/day)	SOx (lbs/day)	CO (lbs/day)	NOx (lbs/day)	CEQA/Permitting Status
Electric Generating Facility (EGF) (In-Basin)					---	
• City of Vernon	914	1,434	146	3281		• Vernon permit applications received end of June 2006; CEC deemed complete 9/14/06
• Sun Valley	500	717	73	1641		• Sun Valley and Walnut Creek permit applications complete; CEC deemed complete 2/1/06
• Walnut Creek	500	717	73	1641		
• BP Carson/Edison Mission Group	500	717	73	1641		• BP/Edison applications not submitted to SCAQMD or CEC
• AES Highgrove	300	430	44	985		AES application filed with CEC deemed complete July 19, 2006
TOTAL	2,714	4,015	409	9,189	---	